

REMARK/DISCUSSION OF ISSUES

In the Final Office Action, Examiner Reis rejected pending claims 1-8 and 12-16 on various grounds. The Applicant responds to each rejection as subsequently recited herein, and respectfully requests reconsideration of the present application:

- A. Examiner Reis rejected pending claims 1-4, 6, 7 and 12-16 under 35 U.S.C. §103(a) over U.S. Patent No. 6,292,528 to *Wieczorek et al.* in view of Japan Patent Reference JP 09054 162 A to *Haruo et al.* and in further view of U.S. Patent No. 6,265,782 to *Yamamoto et al.*

The Applicant has thoroughly reconsidered Examiner Reis' remarks concerning the patentability of claims 1-4, 6, 7 and 12-16 over *Wieczorek* in view of *Haruo* and in further view of *Yamamoto*. The Applicant has also thoroughly re-read *Wieczorek* in view of *Haruo* and in further view of *Yamamoto*. The Applicant respectfully traverse this obviousness rejection of claims 1-4, 6, 7 and 12-16 for a second time, because Examiner Reis has failed to establish a *prima facie* case of obviousness as required by MPEP §2143. Specifically, Examiner Reis has failed to cite a suggestion or a motivation, in *Wieczorek*, *Haruo* and *Yamamoto* to modify *Wieczorek* in view of *Haruo* and in further view of *Yamamoto* to obtain the claimed invention as recited in independent claims 1 and 13.

Specifically, independent claim 1 recites "wherein said intermediate layer (2) contains at least two adhesives (A, B) of different consistency and spacers (5)", and independent claim 13 recites "said first intermediate layer (2) including a first spacer (5) in contact with said ceramic basic element (4) and said CMOS chip (3), a first adhesive (A1) adhered to said ceramic basic element (4) and said CMOS chip (3), and a second adhesive (B) adhered to said ceramic basic element (4) and said CMOS chip (3)". Examiner Reis correctly recognizes that *Wieczorek* teaches each limitation of claims 1 and 13 except for the "spacers" of the aforementioned limitation of claims 1 and 13, that *Haruo* discloses the "spacers" of the aforementioned limitation of claims 1 and 13, and that *Yamamoto* fails to teach or suggest the "spacers" of the

aforementioned limitation of claims 1 and 13. Examiner Reis asserts that it would have been obvious to one of ordinary skill in the art at the time the present invention was made to incorporate spacers 5 of *Haruo* as best illustrated in FIG. 1 of thereof between a scintillator 11 and a CMOS chip 9 of *Wieczorek* as illustrated in FIG. 3 thereof with the expectation of making a uniform and regulated adhesive layer 13 of *Wieczorek* between the scintillator 11 and the CMOS chip 9 of *Wieczorek*.

The Applicant traverses this assertion by Examiner Reis, because the mere fact that *Wieczorek* can be modified in view of *Haruo* to obtain the "spacers" of the claimed invention as recited in independent claims 1 and 13 does not render the resultant modification obvious unless the prior art also suggests the desirability of the combination. See, *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990) (Claims were directed to an apparatus for producing an aerated cementitious composition by drawing air into the cementitious composition by driving the output pump at a capacity greater than the feed rate. The prior art reference taught that the feed means can be run at a variable speed, however the court found that this does not require that the output pump be run at the claimed speed so that air is drawn into the mixing chamber and is entrained in the ingredients during operation. Although a prior art device "may be capable of being modified to run the way the apparatus is claimed, there must be a suggestion or motivation in the reference to do so." 916 F.2d at 682, 16 USPQ2d at 1432.). See also *In re Fritch*, 972 F.2d 1260, 23 USPQ2d 1780 (Fed. Cir. 1992) (flexible landscape edging device which is conformable to a ground surface of varying slope not suggested by combination of prior art references).

The basis for Examiner Reis' assertion is that *Haruo*, as best illustrated in FIG. 2 thereof, teaches spacers 5 for making a uniform space 6 between a scintillator array 3 and a photodetector array 2 and for regulating space 6 between scintillator array 3 and photodetector array 2 to improve the uniformity of a detection sensitivity by photodetector array 2. However, while the present invention is premised on the use of spacers, the present invention was conceived in view of overcoming a drawback of *Haruo* in failing to achieve a complete expulsion of air around an

adhesive 7 within the space 6 between scintillator array 3 and photodetector array 2 despite *Haruo*'s claim of adhesive 7 within space 6 excluding any air bubble or vacuum bubbles. The reason for overcoming *Haruo* is a uniform space can not be achieved by the spacer teachings of *Haruo* without a complete expulsion of air.

Specifically, *Haruo* teaches a placement of spacers 5 between and along the edges of scintillator array 3 and photodetector array 2. Thus, at the time of the present invention, any incorporation of the spacers 5 of *Haruo* between the scintillator 11 and the CMOS chip 9 of *Wieczorek* by one having ordinary skill in the art of the present invention would have involved a placement of the spacers 5 of *Haruo* along the edges of the scintillator 11 and the CMOS chip 9 of *Wieczorek*. However, as taught by the present application and as would be appreciated by those having ordinary skill in the art, a complete expulsion of such bubbles around the adhesive 7 within the space 6 of *Haruo* is not possible by *Haruo*'s teaching a placement of spacers 5 along the edges of scintillator array 3 and photodetector array 2. See, U.S. Patent Application Serial No. 10/023,168 at page 1, line 21 to page 2, line 5. Thus, the Applicant respectfully asserts that the use of spacers without complete expulsion of air bubbles does not achieve a uniform spacing, and therefore, there was no motivation or suggestion at the time of the present invention for one having ordinary skill in the art to incorporate spacers 5 of *Haruo* along the edges of the scintillator 11 and the CMOS chip 9 of *Wieczorek* in view of the fact that air bubbles would be present between spacers 5 of *Haruo* and adhesive layer 13 of *Wieczorek*.

Moreover, *Haruo* predates *Wieczorek*. Thus, at time of *Wieczorek*, it was known that a uniform and air-free adhesive space between the scintillator 11 and the CMOS chip 9 of *Wieczorek* would be necessary for the effective operation of *Wieczorek*. The Applicant therefore respectfully asserts that *Wieczorek* must be interpreted as implying a teaching of manufacturing a uniform and air-free adhesive layer 13 as best illustrated in FIG. 3 in view of the failure of *Wieczorek* to teach spacers or any other technique for achieving at least a uniform adhesive space between the scintillator 11 and the CMOS chip 9 of *Wieczorek*.

As to Examiner Reis' assertion in the Final Office Action directed to isolating the spacer teaching of *Haruo* from the failure by *Haruo* to teach or suggest expulsion of bubbles for purposes of supporting this obviousness rejection, the Applicant respectfully asserts that the expulsion of air bubbles is important from the viewpoint of one skilled in the art in terms of achieving a uniform adhesive space between a scintillator and a CMOS chip, and therefore the manner by which the spacer teaching of *Haruo* would be applied for purposes of conceiving the present invention is important. Specifically, the Applicant respectfully asserts that one skilled in the art would only consider the spacer teachings of *Haruo* relevant if the manner by which *Haruo* teaches the use of spacers also included the complete expulsion of air bubbles to thereby ensure a uniform adhesive space between a scintillator and a CMOS chip. Thus, without such teachings by *Haruo* on how to completely expulse the air bubbles, one skilled in the art would not be motivated to use the spacer teachings of *Haruo*.

In summary, Examiner Reis fails to provide a suggestion or a motivation to modify *Wieczorek* in view of *Haruo* as proposed by Examiner Reis, and *Wieczorek* teaches away from the modification of *Wieczorek* in view of *Haruo* as proposed by Examiner Reis. Withdrawal of the rejection of independent claims 1 and 13 under §103(a) as being unpatentable over *Wieczorek* in view of *Haruo* and *Yamamoto* is therefore respectfully requested.

Claims 2-4, 6, 7 and 12 depend from independent claim 1. Therefore, dependent claims 2-4, 6, 7 and 12 include all of the elements and limitations of independent claim 1. It is therefore respectfully submitted by the Applicant that dependent claims 2-4, 6, 7 and 12 are allowable over *Wieczorek* in view of *Haruo* and *Yamamoto* for at least the same reason as set forth herein with respect to independent claim 1 being allowable over *Wieczorek* in view of *Haruo*. Withdrawal of the rejection of dependent claims 2-4, 6, 7 and 12 under U.S.C. §103(a) as being patentable over *Wieczorek* in view of *Haruo* and *Yamamoto* is therefore respectfully requested.

Claims 14-16 depend from independent claim 13. Therefore, dependent claims 14-16 include all of the elements and limitations of independent claim 13. It is therefore respectfully submitted by the Applicant that dependent claims 14-16 are allowable over *Wieczorek* in view of *Haruo* and *Yamamoto* for at least the same reason as set forth herein with respect to independent claim 13 being allowable over *Wieczorek* in view of *Haruo*. Withdrawal of the rejection of dependent claims 14-16 under U.S.C. §103(a) as being patentable over *Wieczorek* in view of *Haruo* and *Yamamoto* is therefore respectfully requested.

- B. Examiner Reis rejected pending claim 5 under 35 U.S.C. §103(a) over U.S. Patent No. 6,292,528 to *Wieczorek* et al. in view of Japan Patent Reference JP 09054 162 A to *Haruo* et al. U.S. Patent No. 6,265,782 to *Yamamoto* et al. and in further view of U.S. Patent No. 6,063,688 to *Doyle* et al.

Claim 5 depends from independent claim 1. Therefore, dependent claim 5 includes all of the elements and limitations of independent claim 1. It is therefore respectfully submitted by the Applicant that dependent claim 5 is allowable over *Wieczorek*, in view of *Haruo* and *Yamamoto* and in further view of *Doyle* for at least the same reason as set forth herein with respect to independent claim 1 being allowable over *Wieczorek*, in view of *Haruo*. Withdrawal of the rejection of dependent claim 5 under U.S.C. §103(a) as being patentable over *Wieczorek*, in view of *Haruo* and *Yamamoto* and in further view of *Doyle* is therefore respectfully requested.

- C. Examiner Reis rejected pending claim 8 under 35 U.S.C. §103(a) over U.S. Patent No. 6,292,528 to *Wieczorek* et al. in view of Japan Patent Reference JP 09054 162 A to *Haruo* et al. U.S. Patent No. 6,265,782 to *Yamamoto* et al. and in further view of U.S. Patent No. 6,149,478 to *Boedinger* et al.

Claim 8 depends from independent claim 1. Therefore, dependent claim 5 includes all of the elements and limitations of independent claim 1. It is therefore respectfully submitted by the Applicant that dependent claim 8 is allowable over *Wieczorek*, in view of *Haruo* and *Yamamoto* and in further view of *Boedinger* for at least the same reason as set forth herein with respect to independent claim 1 being allowable over *Wieczorek*, in view of *Haruo*. Withdrawal of the rejection of dependent claim 8 under U.S.C. §103(a) as being patentable over *Wieczorek*, in view of *Haruo* and *Yamamoto* and in further view of *Boedinger* is therefore respectfully requested.

SUMMARY

Examiner Reis' rejections of pending claims 1-8 and 12-16 have been obviated by the remarks herein supporting an allowance of claims 1-8 and 12-16 over *Wieczorek* in view of *Haruo* and in further view of *Yamamoto*. The Applicant respectfully submits that claims 1-8 and 12-16 as listed herein fully satisfy the requirements of 35 U.S.C. §§ 102, 103 and 112. In view of the foregoing, favorable consideration and early passage to issue of the present application is respectfully requested. If any points remain in issue that may best be resolved through a personal or telephonic interview, Examiner Reis is respectfully requested to contact the undersigned at the telephone number listed below.

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Respectfully submitted,
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